eShipGlobal

SHIPPING AWARENESS TRAINING
for RESEARCH MATERIALS

IMPORT/EXPORT, Materials of Trade Requirement

University of Massachusetts
Amherst
Environmental Health & Safety
Research & Engagement
New Shipping Service

UMass has developed a new mandatory tracking system with eShip Global to provide better management for shipments of:

- Chemicals
- Biological substances, including plant pathogens and agents carrying rDNA
- Samples with dry ice or liquid refrigerants
- Research samples or any other materials that could contain dangerous goods in any amount (e.g. biological samples in ethanol)
- Live animals
- Items shipped to another country or within the US
- Intellectual property
- Lithium ion batteries
Shipping Regulations

A variety of national and international agencies regulate the transport, exporting, and importing of research materials. These agencies can include but are not limited too:

– International Air Transport Association (IATA)
– U.S. Department of Transportation (DOT)
– U.S. Environmental Protection Agency - Toxic Substances Control Act (TSCA)
– U.S. Department of Homeland Security (DHS)
– U.S. Department of State, Directorate of Defense Trade (DDTC)
– U.S. Department of Commerce (DOC)
– U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS)
– U.S. Department of Treasury, Office of Foreign Asset Control (OFAC)
– Centers for Disease Control and Prevention (CDC)
– U.S. Fish and Wildlife Service (USFWS)
Research Materials

Many research materials can be regulated by one or more of these shipping regulations if they are offered for transport or exported to another person, facility, or university.
What is an Export?

An item sent from the United States to a foreign destination such as biological, chemical, and radioactive materials.

Or

An item sent to a foreign national within the US as a domestic shipment

These restrictions can apply to regulated materials, equipment, technology and technical data

These items are generally sent using a carrier such as FedEx, World Courier, the US Postal Service, or DHL.
Impact on Research

Failure to follow shipping/export regulations may result in the following:

• Package delays during transport
• Mishandling by the courier
• Potential for an inadvertent release of the contents
• Criminal and civil penalties accruing to the individual

Complying with shipping regulations protects the material being shipped, those individuals handling the package, and controls the potential for negative impacts on the environment.
Export Penalties

Violation of Export regulations:

- Fines & penalties up to $1,000,000
- Imprisonment
- Export privileges can be revoked

For example, The University of Massachusetts at Lowell was recently fined $100,000 for an unlicensed export of atmospheric sensing equipment to Pakistan’s Space and Upper Atmosphere Research Commission (“SUPARCO”).
Hazardous Material Identification
Some Common Examples

<table>
<thead>
<tr>
<th>UN Number</th>
<th>Proper Shipping Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3373</td>
<td>Biological Substance, Category B</td>
</tr>
<tr>
<td>UN1230</td>
<td>Methanol</td>
</tr>
<tr>
<td>UN3090</td>
<td>Lithium battery</td>
</tr>
<tr>
<td>UN1845</td>
<td>Dry Ice</td>
</tr>
<tr>
<td>UN 3245</td>
<td>Genetically Modified Microorganism</td>
</tr>
</tbody>
</table>
Shipping Restrictions

Research materials may NOT be hand carried onto an aircraft in any manner AND must not be transported in a personal vehicle
IATA/DOT Requirements

• EH&S will assist and approve all DOT/IATA shipments which include defined Dangerous Goods such as ethanol, preservatives and chemicals with a UN number
• DOT/IATA shipments must be conducted by an IATA trained person (initially a minimum of 16 hours renewed every 2 years)
• Exceptions: Category B and dry ice shipment training is conducted through OWL and individuals with current training can do this without assistance
• Containers must meet certain specifications
• Shipping papers must be exact
• Shipments must be packed in accordance with packing instructions
• Labels must be correct and placed according to specifications
• Rejection will cost time and money
Current Transport Providers

- The University has a preferred agreement with UPS with special rates negotiated with eship Global
- This agreement includes Category B and dry ice shipments
- Fedex rates are also in the system specifically as a back-up or for locations not served by UPS
- Final pricing based on the negotiated rates are in the system and cannot be changed
- Other Fedex accounts can be used, if provided, such as a receiver’s account
Training

OWL Training is available for:

• Dry ice shipments (any quantity)
• Category B biological substances

[http://www.ehs.umass.edu/owl-online-training](http://www.ehs.umass.edu/owl-online-training)

Individuals that have completed this training can use eship to process their packages for these categories without EH&S assistance

Eship awareness training is required for non-regulated shipments
Work Flow

Start Shipping

UMASS SHIPPERS

Single Sign On Authentication

Yes

Are you Shipping Cash & or Dry Ice?

No

Are you Shipping Chemical Radiocative?

No

Are you Shipping Other Non HAZ?

Yes

End

Packaging

Email sent to Jennifer, Judy & CC: Garry

Disapprove

Email sent to Jennifer & Garry

Disapprove

Email sent to Jennifer

Disapprove

Jennifer to approve or not

(Judy to approve or not)

Approve

Under $50

Approve

Email sent to Jennifer

Disapprove

Confidential Property of eShipGlobal Inc.
Features of eShip

- Secure, safe and compliant
- Integrates with UMass systems, shipping / financial / authentication
- Customized for UMass and reduces bottlenecks
- Create multiple material databases
- Produce accurate shipping documentation
- Properly mark and label your packages
- Print/Save/Forward shipment information to airline and shipping carriers
- Forward shipment information to Emergency Response Providers (ERP)
Expectations

- Monitor and control costs
- Gain peace of mind in knowing your shipment is delivered on time, every time
- Eliminate wasted time and effort from faulty shipping documentation
- Avoid fines, delays, and/or potential jail terms from failed shipments
- Increase efficiency, ship more accurately
- Compliant with government regulations
- No software needed ~ web-based system
Overview - Create a Lab Shipment

1. Create a user profile then login to Umass eShipGlobal
2. Click on Ship Research Material
3. Classify the Material type and validate the training level
4. Tender a Shipment
5. Select the shipment material and enter specifications
6. Continue if authorized to process this shipment
7. Choose a carrier and service option
8. Confirm Shipment Creation and submit for approval
9. Print the Way Bill, BOL, and Shipping documentation
Sample Shipment
Starting a Shipment

Does your shipment contain any of the following:

- Biological Materials
- Chemicals
- Radioactive Materials

- Yes
- No
Classification

Stage 1: Material Classification and Training Verification

Which of the following materials will be part of your shipment? (Check all that apply)

- BIOLOGICAL MATERIALS
  (May include dry ice, glycerol, and/or DMPO. If other preservatives are used please check chemicals as well.)
- CHEMICALS
- RADIOACTIVE MATERIALS
- NEWLY SYNTHESIZED NON-HAZARDOUS CHEMICALS
- DRY ICE
  (with no other materials listed above)
- SPECIAL PROVISION A100
- SPECIAL PROVISION A152 (DRY SHIPPERS)

Continue  Start Over
Material Classification & Training Verification

Based on the answers to the questionnaire, the system determines the classification of the material, and the training required to ship the material.

The system will verify the user’s eligibility to process the shipment based on their current training level.

This user is verified as “trained” to ship this material.

Click Continue.
The system will verify the user’s eligibility to process the shipment based on their current training level. This user will not be allowed to continue with the shipping.
Material Selection

RESEARCH MATERIAL SHIPPING
Stage 2: Material Selection

MATERIAL DATABASE

Identify the research material that you plan to ship. Then click Continue button to proceed to Shipment details. Required fields are indicated by an asterisk.

Material Entry

Material Classification: UN 2814 Infectious substance, affecting humans

*Material Name: 
UN NO: 2814
Proper Shipping Name: Infectious substance, affecting humans
Class Or Division: 6.2
Packing Group: 
Labels: Infectious sub
Packing Instructions: 620
Special Permit: 
Authorization: --- Not Required ---

- Dangerous goods in excepted quantities? (FORBIDDEN)
- Dangerous goods in limited quantities? (Max. Net Qty: FORBIDDEN)
- Cargo aircraft only? (Max. Net Qty: 4 L)

Maximum Quantity per inner receptacle: ml (Max. Inner Qty: NA)
*Total Quantity in Package: ml (Max. Total Qty: 0.05 L)
*Net Value in USD (Min. 1):

Click Continue
Material Selection

Upon the user’s prompt, the system would list material names in the chosen category from user’s previous shipments.

Key in the total quantity of the package and the value of this shipment.

Click Continue.
Shipment Creation

The system would auto-populate the Sender information based on the user’s profile.

The address book feature facilitates time-less address entry of the receiver.

The system generates the material information filed out in the “Material Selection” stage here.

Select a package type, service type, total weight of the shipment and dimensions (need the box present).

Enter the Billing references information – Carrier Account number and the billing zip code.

<table>
<thead>
<tr>
<th>Ship From: Shipper Information</th>
<th>Shipping Date: 10/27/2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship To:</td>
<td></td>
</tr>
<tr>
<td>Company/Location</td>
<td>eShipGlobal Inc.</td>
</tr>
<tr>
<td>Contact</td>
<td>Peter Sam</td>
</tr>
<tr>
<td>Address</td>
<td>5800 Campus Circle Dr</td>
</tr>
<tr>
<td>City/State Zip Code</td>
<td>Irving TX 75063</td>
</tr>
</tbody>
</table>

Research Materials:

<table>
<thead>
<tr>
<th>Material Name</th>
<th>Material Classification</th>
<th>UN or ID No.</th>
<th>Harmonized Code</th>
<th>Net Weight</th>
<th>Net Value (USD)</th>
<th>Q Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Typhimurium</td>
<td>Category A UN 2814 Infectious Substance, Affecting Humans</td>
<td>UN2814</td>
<td>20ml</td>
<td>1</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

Package Info:

| No. of pkgs. for each address above: | 1 | Identical
| Total Pkg Weight: | (lbs) | Dimensions: | x | x |

Billing References:

<table>
<thead>
<tr>
<th>Project:</th>
<th>Costcode:</th>
<th>Departments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill To:</td>
<td>Prepaid</td>
<td>Recipient/Third Party Access: Not Required</td>
</tr>
</tbody>
</table>
Shipment Creation

Choose any special delivery instructions for this shipment

Check the shipment delivery notifications as desired

Click on Show Quote to evaluate and choose carrier options or click on Ship if you have already selected a service

Clicking on ‘Show Quote’/‘Ship’ would validate the shipment with the RPS database

Compliance Checker

Please wait while we check this shipment for Compliance...

Validating address with RPS database...

Compliance check complete. Processing shipment...
Compliance Checker - Failure

The message indicates that shipment cleared validation with RPS database, however failed to clear Export Control database.

**Shipment cannot be continued**

- **ECCN:** 1C351
- **Status:** Country of destination regulated by the Country Chart.
- **Control Reason:** Chemical and Biological Weapons (CB) Column 1
- **Other Controls:** Chemical Weapons Convention (CW)
- **Exceptions:** LVS: N/A, GBS: N/A, CIV: N/A
Choose one of the carrier service options available for this shipment and be informed of the estimated cost. Click Continue to proceed.
Click on Complete Shipment to finish your order. An Instruction check list opens up for your review.

Read through the instruction completely and click 'continue' to print the necessary documentation/paperwork.
Order Summary

**International Shipment order summary**
Print Airway bill

Click on Print Airway bill button

Print two copies of the Airway bill and attach to the package
Shipper’s Declaration Form

Click on the Print Dangerous Goods form and attach the Shipper’s declaration to the lab shipment.
Address Labels

Print the sender’s and receiver’s address information. For Dry Ice Shipments, the address label would include the dry ice symbol.

Click on Address Labels button
Packaging Instruction and Labels

<table>
<thead>
<tr>
<th>Order No: 101066045</th>
<th>Tracking No: 795343451908</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipment Info</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Origin</strong></td>
<td><strong>Destination</strong></td>
</tr>
<tr>
<td>UC Berkeley</td>
<td>eShipGlobal Inc</td>
</tr>
<tr>
<td>2199 Addison Street</td>
<td>FedEx Priority Overnight</td>
</tr>
<tr>
<td>94334, CA 94720</td>
<td>Irving TX 75063</td>
</tr>
<tr>
<td>United States</td>
<td></td>
</tr>
<tr>
<td><strong>Package Info</strong></td>
<td><strong>Scan Activity</strong></td>
</tr>
<tr>
<td>FedEx</td>
<td>no information at this</td>
</tr>
<tr>
<td></td>
<td>time.</td>
</tr>
<tr>
<td><strong>Total for this shipment</strong></td>
<td>$124.39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Material Name</strong></th>
<th><strong>Material Classification</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>ACINETOBACTER</td>
<td>Category A UN 2814 Infectious Substance, Affecting Humans</td>
</tr>
<tr>
<td>BAUMANNII</td>
<td>UN NO: UN 2814 Net Weight/Volume: 20 ml</td>
</tr>
</tbody>
</table>

**Acceptance Checklist for Infectious Substance, Category A materials with or without Dry Ice**

Is the following information correct for each entry?

<table>
<thead>
<tr>
<th>SHEIPPERS DECLARATION FOR DANGEROUS GOODS (DDG)</th>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Two copies in English and in the IATA format (Three copies for FedEx)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Full name and address of Shipper and Consignee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. If the Air Waybill number is not shown, enter it</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The number of pages shown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The non-applicable Aircraft Type Deleted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. If full name of Airport or City of Departure or Destination is not shown, enter it</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. The word “Radioactive” deleted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Identification</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. UN or ID Number proceeded by prefix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Proper Shipping Name and the technical name in brackets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Class or Division number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Packing Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quantity and Type of Packing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Number and Type of Packages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Quantity and unit of measure within each package limit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. When different goods are packed in one outer packaging, the following rules are complied with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Compatible according to Table 3.5 A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- UN packages containing Division 6.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- All packed in one (type of packaging)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Overpack – if used</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Wording “Overpack Used”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Packing Instructions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Packing Instruction Number</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Click on the Packaging Instructions and Labels and complete the check list.
Schedule Pick up

Enter date, time, location and package weight to enable carrier to process this pick up request.

Click on Schedule Pickup button. The system will open up a Pick up request form.
Shipment History

Modify the date range to view the list of Shipments created by the user. Acts as a reporting tool for Stakeholders.

Click on Schedule History button to view all the shipments created under this account.
International Shipment - Commercial Invoice

**Commercial Invoice is an additional documentation that is required for an International Shipment**

Click to print docs button to print the commercial Invoice and attach to the shipment.
Things to Know

- UPS/Fedex must receive pick-up request at least 2 hours before pick-up
- Pick-up time is 3:30 at LGRT 179 (CEMS), good planning will avoid delays
- Alternate pick-up locations will be made available eventually
- It is best to ship dry ice shipments Monday-Wednesday since there is about a 5 day preservation period
- Dry shippers that use liquid nitrogen are not regulated and can keep a sample for up to 15 days
- Countries have rejection authority over shipments and we may not get it back e.g. China
- There are currently 2 IATA trained employees on campus
- All shipments must be reviewed for export requirements
- Know your box dimensions and approximate weight before you start
- Approval will be as fast as feasible, typically within one day
- Rejections by the hauler will be returned with a surcharge
- Costs are billed to a valid Procard